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Résumé de l'article

Cet article montre l'aspect le plus remarquable du développement industriel extensif de la ville d'Hamilton, Ontario durant les années tôt de 1870. Ce dernier était réalisé en grande partie par l'adaptation et l'expansion des structures préexistantes fermement enracinées dans le monde traditionnel de la production. Les premières instances d'industrialisation d'Hamilton étaient mixtes et disproportionnées. Pourtant, l'ouvrage du travail s'est retenu distinct à l'usine agrandie. « L'industrie moderne, » dans la forme limitée qu'elle aurait pu avoir existée, avait encore le défi de s'établir comme un aspect typique de l'entreprise industrielle. Ceci n'était pas étonnant vu que presque tous les hommes qui menaient l'industrialisation de la ville étaient des anciens artisans ainsi que des ouvriers intimement au courant des techniques et des possibilités de la production de l'oeuvre. Cet article trace les structures du mouvement tôt de l'industrialisation afin de suggérer l'exigence pressante chez les historiens pour reconsidérer le potentiel pour la continuité de l'expérience du l'ouvrier pendant le mouvement tôt de l'industrialisation.

Craftsworkers and Canada's First Industrial Revolution: Reassessing the Context

ROBERT B. KRISTOFFERSON

Abstract

This paper shows that the most remarkable aspect of the far-reaching industrial development of Hamilton, Ontario by the early 1870s was that it was achieved largely through the adaptation and expansion of pre-existing structures of production firmly rooted in the traditional crafts world. The early industrialization of Hamilton was combined and uneven, but handicraft production stood in distinction to the enlarged manufactory. "Modern Industry," in what limited form it may have existed at all, had yet to establish itself as a typical form of industrial enterprise. All this is not surprising, since almost all those men leading the industrialization of the city were themselves former artisans and craftsworkers intimately familiar with the techniques and possibilities of craft production. This paper delineates the structures of early industrialization to suggest the pressing need for historians to reconsider the potential for continuity of craftsworker experience during early industrialization.

Résumé

Cet article montre l'aspect le plus remarquable du développement industriel extensif de la ville d'Hamilton, Ontario durant les années tôt de 1870. Ce dernier était réalisé en grande partie par l'adaptation et l'expansion des structures préexistantes fermement enracinées dans le monde traditionnel de la production. Les premières instances d'industrialisation d'Hamilton étaient mixtes et disproportionnées. Pourtant, l'ouvrage du travail s'est retenu distinct à l'usine agrandie. « L'industrie moderne, » dans la forme limitée qu'elle aurait pu avoir existée, avait encore le défi de s'établir comme un aspect typique de l'entreprise industrielle. Ceci n'était pas étonnant vu que presque tous les hommes qui menaient l'industrialisation de la ville étaient des anciens artisans ainsi que des ouvriers intimement au courant des techniques et des possibilités de la production de l'œuvre. Cet article trace les structures du mouvement tôt de l'industrialisation afin de suggérer l'exigence pressante chez les historiens pour reconsidérer le potentiel pour la continuité de l'expérience du l'ouvrier pendant le mouvement tôt de l'industrialisation.

THIS PAPER OFFERS AN ALTERNATE VIEW of the early industrialization of one Canadian city familiar to historians – Hamilton, Ontario. By assessing the degree of both continuity and change discernible in Hamilton's first round of industrialization from about the mid-1830s to the early 1870s it provides a better understanding of the economic and personal structures within which craftsworkers' formed their experience of this process. Its findings will delineate the contours and characteristics – the broad structure – of the city's early industrial growth. More specifically, it demonstrates that, while by the terminal date of this study the work environment of Hamilton craftsworkers had been significantly modified, it had not been fundamentally transformed. This paper shows that, up until at least the early 1870s, artisan-entrepreneurs and craftsworkers in Hamilton achieved an impressive degree of industrialization that nevertheless maintained profound – almost pervasive – continuity in the pre-existing craft mode of production. These findings suggest a reinterpretation of the general nature of the first industrial revolution in Hamilton and similar cities and towns and raises important questions about established models of class formation among craftsworkers.

How much change occurred as a result of early industrialization? Quite a bit, judging from the bulk of labour history written over the past two or three decades. There appears to be something of a consensus, for example, around the idea that the change wrought in the first decades of industrialization can easily enough be "read" in the damaged social relations between artisans-craftsworkers-skilled workers and their bosses. Indeed, over the last two or three decades, the story of the craftsworker during industrialization has been one of dispossession. Referred to variously as "proletarianization," the "declension model," the "shop-breakdown model," and the "decline of the small producer" among others, dispossession accounts outline the various and overwhelming ways traditional artisan-craftsworkers became increasingly proletarianized over the nineteenth century. Articles and monographs, mainly by practitioners of the "new" labour history, have woven Marxian theory into a heavy empirical cloak from myriad accounts of the despoliation of the means of production from craftsworkers both in North America and elsewhere.[1] The

1 A partial list of these works includes: Michael Hanagan, *The Logic of Solidarity: Artisans and Industrial Workers in Three French Towns, 1871-1914* (Urbana: University of Illinois Press, 1980); Joan Wallach Scott, *The Glassworkers of Carmaux: French Craftsmen and Political Action in a Nineteenth Century City* (Cambridge Mass.: Harvard University Press, 1974); E.P. Thompson, *The Making of the English Working Class* (London: Penguin, 1964, 1984); E.J. Hobsbawm, *Labouring Men* (New York: Basic Books, 1964); Herbert Gutman, "Work, Culture and Society in Industrializing America, 1815-1914," *American Historical Review* 78 (June 1973); David Montgomery, "Workers' Control of Machine Production in the Nineteenth Century," *Labor History* 17 (1976): 486-509; Alan Dawley, *Class and Community: The Industrial Revolution in Lynn* (Cambridge: Harvard University Press, 1976); Sean Wilentz, *Chants Democratic: New York City and the Rise of the American Working Class, 1788-1850*

dispossession model was firmly established in the Canadian historiography almost three decades ago in well-known studies of Toronto and Hamilton.[2] In the intervening years some historians have shown that the uneven nature of early industrialization often contained important continuities that moderated craftsworkers' emergent understandings of their material situation.[3] While adding great complexity to our understandings of the nineteenth century craftsworker in Canada, these studies focus more on the extent to which craftsworkers realized and acted upon a material situation built on the decidedly (dispossessed) capitalist wage relationship than in examining the degree to which formal dispossession of the means of production had actually become a feature of craftsworker life.[4]

Some historians have begun to question more directly whether the universal application of the dispossession model reveals the true complexity of

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(New York: Oxford University Press, 1984); Bruce Laurie, *Working People of Philadelphia, 1800-1850* (Philadelphia: Temple University Press, 1980), and *Artisans Into Workers: Labor in Nineteenth Century America* (New York: Hill and Wang, 1989); Stephen J. Ross, *Workers on the Edge: Work, Leisure, and Politics in Industrializing Cincinnati, 1788-1890* (New York: Columbia University Press, 1985); Susan E. Hirsch, *Roots of the American Working Class: The Industrialization of Crafts in Newark, 1800-1860* (Philadelphia: University of Pennsylvania Press, 1978); Howard B. Rock, *Artisans of the New Republic: The Tradesmen of New York City in the Age of Jefferson* (New York: New York University Press, 1979); Paul G. Faler, *Mechanics and Manufacturers in the Early Industrial Revolution: Lynn, Massachusetts, 1780-1860* (Albany: SUNY Press, 1982). See also Sean Wilentz, "Artisan Origins of the American Working Class," *International Labor and Working Class History*, 19 (Spring 1981): 1-22.

2 See Gregory S. Kealey, *Toronto Workers Respond to Industrial Capitalism, 1867-1892* (Toronto: University of Toronto Press, 1980); Bryan D. Palmer, *A Culture in Conflict: Skilled Workers and Industrial Capitalism in Hamilton, Ontario, 1860-1914* (Montreal & Kingston: McGill-Queen's University Press, 1979) and Palmer, *Working Class Experience: Rethinking the History of Canadian Labour, 1800-1991* (Toronto: McClelland & Stewart, 1992). See Christina Burr, *Spreading the Light: Work and Labour Reform in Late Nineteenth Century Toronto* (Toronto: University of Toronto Press, 1999) for a recent account built upon this view.

3 These works include Craig Heron, "Factory Workers," *Labouring Lives: Work & Workers in Nineteenth Century Ontario*, Paul Craven, ed. (Toronto: University of Toronto Press, 1995), 479-594; Ian McKay, "Capital and Labour in the Halifax Baking and Confectionery Industry During the Last Half of the Nineteenth Century," *Labour/ Le Travailleur* 3 (1978): 63-108; David Burley, *A Particular Condition in Life: Self-Employment and Social Mobility in Mid-Victorian Brantford, Ontario* (Kingston & Montreal: McGill-Queen's University Press, 1994); Paul Craven and Tom Traves, "Dimensions of Paternalism: Discipline and Culture in Canadian Railway Operations in the 1850s," in *On the Job: Confronting the Labour Process in Canada*, eds. Craig Heron and Robert Storey (Montreal & Kingston: McGill-Queen's University Press, 1986), 47-74; Craven, "Labour and Management on the Great Western Railway," in his *Labouring Lives*, 341-74.

4 For an extended discussion of this see Robert B. Kristofferson, *Craft Capitalism: Craftsworkers and Industrialization in Hamilton, Ontario, 1840-1872* (Toronto: University of Toronto Press, forthcoming 2007), especially Chapter 1.

craftsworker experience of nineteenth-century industrialization.[5] Contributing to this crucial reorientation of research, this paper suggests that, before historians can reconsider dispossession, they must first re-examine the overall interpretation of industrialization upon which such accounts have been based. These accounts of industrialization – themselves various and referred to here as the mass production model – typically describe the obliteration of traditional forms of production and present the rise of "Modern Industry" and the move towards mass production methods as inevitable.[6] Whether made consciously or not, this connection has led to over-arching assertions that present the rise of modern industry and the decline of the craftsworker as two sides of the same equation.[7]

Challenging the mass production model over the past two decades have been some alternate, though somewhat fragmented, accounts of industrialization. Almost all of these studies concentrate on the endurance of smaller scale, often craft-based production into the industrial age. Some studies simply outline these alternative routes, but offer little substantive comment on the effects they likely had on the developing social relations of production between craftsworkers and employers during early industrialization.[8] Most pervasive has been the view that there was some variability in industrialization. Raphael

5 This is a research direction suggested in Gary J. Kornblith, "The Artisanal Response to Capitalist Transformation," *Journal of the Early Republic* 10 (Fall 1990): 315-21; and Richard Stott, "Artisans and Capitalist Development," in *Capitalism in the Early American Republic* ed. Paul A. Gilje (Madison: Madison House, 1997). For one in-depth study see Kristofferson, *Craft Capitalism*.

6 The term "mass production" was first applied in this over-arching way in Charles Sabel and Jonathan Zeitlin, "Historical Alternatives to Mass Production: Politics, Markets and Technology in Nineteenth Century Industrialization," *Past & Present* 108 (August 1985): 133-176. The now-classic European mass production account is David Landes, *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (Cambridge: Cambridge University Press, 1972). In the U.S. this is best represented in the organizational synthesis which has taken shape around the work of Alfred Chandler Jr. See Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge Mass.: Belknap Press, 1977).

7 Witness, for example, Charles Seller's conclusion that the market revolution in Jacksonian America "inaugurated an irreversible proletarianization of the mechanic class." Charles G. Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York: Oxford University Press, 1991), 25.

8 This is especially characteristic of the "historical alternatives" approach pioneered by Michael Piore, Charles Sabel and Jonathan Zeitlin and first expressed broadly in Sabel and Zeitlin, "Historical Alternatives to Mass Production." See also Sabel and Zeitlin, eds., *World of Possibilities: Flexibility and Mass Production in Western Industrialization* (Cambridge: Cambridge University Press, 1997), especially 1-36, and Philip Scranton, "Diversity in Diversity: Flexible Production and American Industrialization, 1880-1930," *Business History Review* 65 (Spring 1991): 27-90. See Kristofferson, *Craft Capitalism*, Chapter 1 for a fuller account of the historical alternatives literature.

Samuel's exposure of the "combined and uneven" nature of Great Britain's industrialization, for example, has been hugely influential in challenging received views of industrialization.[9] In Canada, Craig Heron, in particular, has suggested a new periodization of capitalist industrialization that demarcated distinct phases, rather than a single path of proletarianization. This view characterizes the "first" industrial revolution (roughly 1840-1890) for its limited changes to production.[10]

However, while accounts of combined and uneven development generally provide more varied and textured accounts of industrialization, they are often still rooted in the idea of inevitability expressed in the very scholarship they revise. For example, in his recent survey of European work on industrialization, James Farr notes that while many historians have opted for a more "evolutionary" view of industrialization in recent years, "few disagree on its eventual magnitude." In a similar vein, Patrick O'Brien and Caglar Keydar masterfully outline a skill-intensive variety of industrialization in France that achieved comparable productivity levels to Britain through most of the nineteenth century. They still conclude, however, that the sublimation of workshop to factory was inevitable. Even while arguing that mechanization was neither linear nor smooth, Samuel himself agrees it was a "process" all the same.[11] Craftsworkers have received a similar treatment in the Canadian historiography, where combined and uneven development has been either acknowledged before proceeding on to accounts of dispossession or presented as an economic feature that forestalled but did not prevent their inevitable decline.[12]

Indeed, a good deal of research has simply attempted to wed the exceptional social actors of flexible economies that were characterized by smaller-unit, craft-based production to the familiar logic of the mass production route. A number of historians provide accounts of how craftsworkers and artisanal small producers in flexible economies simply underwent a specific kind

9 See Raphael Samuel, "Workshop of the World: Steam Power and Hand Technology in Mid-Victorian Britain," *History Workshop Journal* 3 (Spring 1977): 6-72; James R. Farr, *Artisans in Europe, 1300-1914* (Cambridge: Cambridge University Press, 2000), and Patrick O'Brien and Caglar Keydar, *Economic Growth in Britain and France, 1780-1914: Two Paths to the Twentieth Century* (London: Allen & Unwin, 1978). For a summary discussion of combined and uneven development in the United States see Walter Licht, *Industrializing America: The Nineteenth Century* (Baltimore: Johns Hopkins Press, 1995), esp. Chapter 2.

10 The initial statement for this can be found in Craig Heron and Robert Storey, "On The Job in Canada," in *On The Job*, Heron and Storey, eds., 3-46. For a more recent treatment see Heron, "Factory Workers," 479-594.

11 Farr, *Artisans in Europe*, 291; O'Brien and Keydar, *Economic Growth in Britain and France*, 192, and Samuel "Workshop of the World," 10.

12 For some examples of the influence of combined and uneven development on the Canadian literature see Kealey, *Toronto Workers Respond*; McKay, "Capital and Labour in the Halifax Baking and Confectionery Industry;" and Heron, "Factory Workers," 479-594.

of proletarianization or experience of alienation from capitalism in this industrializing context. Some wide-ranging studies of British and European cities and towns, for example, point towards increasing power differentials in capitalist class relations as a function of a cumulative "squeezing" of small producers and journeymen through a variety of changes, including dependency-inducing credit and marketing arrangements, the increasing power of merchant-capitalists, and the propensity of small producers to act as "nascent capitalist masters." All of these varieties of dispossession are presented as leading to heightened levels of conflict.[13] Echoes of this in the Canadian historiography are seen most particularly in examinations of independent commodity producers in dependent staple economies, many of whom while not directly proletarianized were nonetheless subjected to the contradictions of capitalism.[14]

Historians have also tended to view social situations that do not fit the mass production model as somehow allowing pre-industrial social relations to live on, almost artificially, before ultimately succumbing to the logic of capi-

13 See Ronald Aminzade, "Reinterpreting Capitalist Industrialization: A Study of Nineteenth Century France," *Social History* 9, no. 3 (October 1984): 329-50; Alan White, "'… We never knew what price we were going to have till we got to the warehouse': Nineteenth Century Sheffield and the Industrial District Debate," *Social History* 22, no. 3 (October 1997): 307-317; Clive Behagg, "Masters and Manufacturers: Social Values and the Smaller Unit of Production in Birmingham, 1800-1850," in Geoffrey Crossick and Heinz-Gerhard Haupt, eds., *Shopkeepers and Master Artisans in Nineteenth Century Europe* (London: Methuen, 1984); Behagg, "Myths of Cohesion: Capital and Compromise in the Historiography of Nineteenth Century Birmingham," *Social History* 119, no. 3 (1986): 375-84; Maxine Berg, "Small Producer Capitalism in Eighteenth Century England," *Business History* 35, no. 1 (1993): 17-39; Lars Magnusson, *The Contest for Control: Metal Industries in Sheffield, Solingen, Remscheid and Eskilstuna During Industrialization* (Oxford: Berg, 1994); Tessie P. Liu, *The Weavers' Knot: The Contradictions of Class Struggle and Family Solidarity in Western France, 1750-1914* (Ithaca: Cornell University Press, 1994). For a related point, see Zeitlin, "Productive Alternatives," 14.

14 See, for example, Daniel Samson, ed., *Contested Countryside: Rural Workers and Modern Society in Atlantic Canada, 1800-1950* (Fredericton: Acadiensis Press, 1994); Rusty Bitterman, "Farm Households and Wage Labour in the Northeastern Maritimes in the Early Nineteenth Century," *Labour/Le Travail* 31 (Spring 1993): 13-46; Sean T. Cadigan, *Hope and Deception in Conception Bay: Merchant-Settler Relations in Newfoundland, 1785-1855* (Toronto: University of Toronto Press, 1995); Allan Greer, "Fur-Trade Labour and Lower Canadian Agrarian Structures," Canadian Historical Association, *Historical Papers* (1981); Marjorie Griffin Cohen, *Women's Work, Markets and Economic Development in Nineteenth Century Ontario* (Toronto: University of Toronto Press, 1988); Bitterman, "The Hierarchy of the Soil: Land and Labour in a Nineteenth Century Cape Breton Community," *Acadiensis* 18, no. 1 (Autumn 1988): 33-55; Rosemary Ommer, ed., *Merchant Credit and Labour Strategies in Historical Perspective* (Fredericton: Acadiensis Press, 1990); Linda Little, "Collective Action in Outport Newfoundland: A Case Study from the 1830s," *Labour/Le Travail* 26 (Fall 1990): 7-36; and R.J. Brym and R.J. Sacouman, eds., *Underdevelopment and Social Movements in Atlantic Canada* (Toronto: New Hogtown Press, 1979).

talism. Historians in Canada and elsewhere, for example, have examined how the sharp edge of class was blunted by such practices as paternalism, which allowed important elements of pre-industrial social relations to extend into the industrial age to serve as temporary but effective tools of class quiescence.[15] Paternalism was a key element of craft culture well into industrialization, but its contours must be seen in a view broader than that provided by the lenses of capitalist inevitability. In all, concentration on the mass production route and its teleological treatment by many historians has resulted in a historiography that generally considers earlier stages of craft production more as the first steps towards the elimination of craft than periods with their own dynamics and social relations. But before the social relations of production can be reassessed, historians must first reconsider the structural dimensions of early industrialization. This will help better focus the direction historians should take when considering these alternative paths. This paper will consider how craftsworkers lived through a stage of economic development – "manufacture" – and did so along a particular path of industrialization. It will outline the structures of an industrialization where much had changed, but much remained the same. It suggests that in some of the many economies that do not fit the mass production model the fundamental work structures of many craftsworkers' work lives were maintained and that the jarring disruption of traditional craft production many historians link with changes in the social relations of production has been overdrawn.

This paper is organized into three sections. A short introduction outlines the nature of industrial growth in Hamilton up to the early 1870s. It shows that the appreciable diversity and scale of the city's industrialization by that point had caused it to emerge as one of the nation's most important industrial centres. A second section examines the flexible, specialized character of the city's industrial growth by 1871. It suggests that the city was the leading national example of this more typical kind of industrialization in nineteenth century Canada, an industrialization likely typical of many other cities, too, but left largely unexplored by historians. More importantly, it shows that Hamilton's significant industrial growth was achieved within a variety of combined and uneven industrial development where an expanded number of small handicraft enterprises stood in generally peaceful coexistence with a considerable number of enlarged manufactories. "Modern Industry" had yet to make its mark on the city. This study explains how significant industrialization occurred in Hamilton without any necessarily fundamental change in productive relations, a finding

15 Patrick J. Joyce, *Work, Politics and Society: The Culture of the Factory in Later Victorian England* (Sussex: Harvester Press, 1980); D. Roberts, *Paternalism in Early Victorian England* (London: Croom Helm, 1979); Craven and Traves, "Dimensions of Paternalism," 47-74. See also H.I. Dutton and J.E. King, "The Limits of Paternalism: The Cotton Tyrants of North Lancashire, 1836-1854," *Social History* 7 (January 1982): 59-74.

which may well apply to many similar places throughout the western industrializing world. It also matters not only how early industrialization related to certain *stages* of growth, but what broad *path* that industrialization had taken. To that end, the final section of the paper outlines the overwhelmingly artisanal origins of Hamilton's industrialists to suggest that continuity in the personal structures of industrialization could well have left the door open to continuity in social experience. This paper offers a beginning point in the reconsideration of early industrialization and the behaviour of its participants.[16]

Hamilton's Industrialization by 1871: Local Growth and National Importance

The story of the breadth and depth of Hamilton's industrialization has oft been told and only its general contours warrant repeating here. While the city early on acquired a reputation as a regional metal centre, a diversified manufacturing sector had fledged by the early 1850s.[17] The opening of the Great Western Railway (GWR) in 1854 provided a powerful boost to industrial development, both from direct stimulus and through the numerous linkages occasioned by opening new markets and providing cheaper access to primary production goods. An economic depression fuelled in part by railway speculation kicked the feet out from under much of this new industrial activity in the late 1850s, but when the economy began to rise again in the early 1860s, it was evident that the city's industrialization was ongoing.

By 1871, Hamilton's flourishing industrial sector had achieved a considerable size and diversity. As it had been since the 1840s, industrial activity in 1871 was dominated by the secondary metals sector. The traditional core of this sector had grown appreciably in size and output, and producers of such items as furnaces, stoves, heaters, agricultural implements, custom castings, tinsmithing, and sheet iron products were now joined by many newcomers. This sector had also undergone significant internal diversification with the addition of railway car and locomotive shops, a rolling mill, and producers of boilers, scales, wire and, most importantly, sewing machines.

The secondary metal industry may have made the most appreciable contribution to the city's value-added production by this year, but the clothing, wood and paper products, construction and primary products sectors as well as

16 This is the preliminary statement from a much larger study that re-examines both early industrialization and craftsworkers' place within it in Hamilton, Ontario. See Kristofferson, *Craft Capitalism*.

17 For an outline of the city's early industrial development see Kristofferson, *Craft Capitalism*, Chapter 1. Michael Katz has shown in his study of business enterprise in the city in 1851 that the small establishment was almost universal in the city that year. Michael B. Katz, *The People of Hamilton, Canada West* (Cambridge MA: Harvard University Press, 1975), 23.

assorted large enterprises in other sectors also made significant value-added contributions. As will be shown in greater detail below, large enterprise, in fact, could be found across most industrial sectors.[18] It is not coincidental, then, that this same year Hamilton named itself the "Birmingham of Canada."[19]

Indeed, by 1871, all this economic activity had enabled Hamilton to emerge as a major industrial centre both provincially and nationally. In Ontario, Hamilton industry ranked second only to Toronto in terms of capital invested, hands employed, wages paid, value of raw material, and annual product value.[20] Elizabeth Bloomfield and G.T. Bloomfield included nine Hamilton manufacturers in their list of Ontario's Top 60 industrial establishments based on these factors as expressed in the 1871 industrial census.[21] The relative weight of Hamilton industry also fared well nationally. Table 1 determines Hamilton to be the nation's fifth largest industrial centre among cities with 5 000 or more inhabitants. Rank totals of this measure average Hamilton's ranking relative to other city's in terms of capital invested, number of hands employed, amounts of yearly wages, raw material value, and total product value.

However, other measures indicate that industrial activity in Hamilton had taken on an even more intensive form. Assessed in terms of value-added per capita, Hamilton ranked fourth nationally among larger towns and cities (see Table 1, Column H). The intensity of industrial activity as it relates most directly to social experience is perhaps most appropriately assessed through a comparison of its penetration of local communities. Table 2 shows that Hamilton led the nation – beating out even Montreal — in the percentage of its total population engaged in industrial pursuits. By any of the above measures, however, Hamilton's industrial entrepreneurs and its craft workforce were leading participants in Canada's early industrialization by 1871.

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18 A detailed survey outlining the impressive size and diversity of industry in Hamilton in 1871 is provided in Kristofferson, *Craft Capitalism*, Chapter 1.

19 *Spectator*, 13 September 1871.

20 This figure is based on a survey of Ontario urban centres with at least 100 industrial workers and above average industrial significance compiled in Elizabeth Bloomfield, "Using the 1871 Census Manuscript Industrial Schedules: A Machine-Readable Source for Social Historians," *Histoire Sociale- Social History* 19, no. 38 (November 1986): 432.

21 Elizabeth Bloomfield and G.T. Bloomfield, *Industrial Leaders: The Largest Manufacturing Firms of Ontario in 1871*, Research Report No. 8 (Guelph: Department of Geography, University of Guelph, 1989). I have added James Williams' Canadian Oil Company located in next to Hamilton in Barton Township and commonly touted as a Hamilton enterprise to the Bloomfield and Bloomfield list of eight Hamilton manufacturers.

Table 1 — Ranked Comparison of Industrial Performance, Cities and Towns Having over 5 000 Inhabitants, Canada, 1871

City	A. Capital Inv. ($)	B. No. Hands Employed	C. Am. Yearly Wages ($)	D. Value. Raw Material ($)	E. Tot. Prod. Value ($)	F. Value-Added ($)	G. Pop.	H. V-A/ Capita ($)	I. * Rank Totals
Montreal	11 101 031	21 187	5 195 668	19 037 962	32 731 966	13 694 004	107 225	127.71	
Rank	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	5 [1]
Quebec C.	2 870 638	7 250	1 459 279	4 771 459	8 449 752	3 678 293	59 699	61.61	
Rank	[3]	[4]	[4]	[3]	[3]	[4]	[2]	[7]	17 [3]
Toronto	4 036 158	9 400	2 690 993	7 168 993	13 686 093	6 517 100	56 092	116.19	
Rank	[2]	[2]	[2]	[2]	[2]	[2]	[3]	[3]	10 [2]
Halifax	1 492 944	2 167	732 151	1 331 090	2 817 480	1 486 410	29 582	50.24	
Rank	[7]	[8]	[7]	[8]	[8]	[7]	[4]	[9]	38 [8]
St. John	2 275 337	7 277	1 796 491	4 540 364	8 312 627	3 772 263	28 805	130.96	
Rank	[4]	[3]	[3]	[4]	[4]	[3]	[5]	[2]	18 [4]
Hamilton	**1 541 264**	**4 456**	**1 329 712**	**2 860 399**	**5 471 494**	**2 611 075**	**26 716**	**97.73**	
Rank	**[6]**	**[5]**	**[5]**	**[5]**	**[5]**	**[5]**	**[6]**	**[4]**	**26 [5]**
Ottawa	1 914 287	3 064	843 521	2 536 664	4 152 960	1 616 306	21 545	75.02	
Rank	[5]	[6]	[6]	[6]	[6]	[6]	[7]	[6]	29 [6]
London	1 001 789	2 261	687 473	1 955 303	3 436 625	1 481 322	15 826	93.6	
Rank	[8]	[7]	[8]	[7]	[7]	[8]	[8]	[5]	37 [7]
Kingston	526 855	1 298	366 669	717 795	1 348 893	631 098	12 407	50.87	
Rank	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[8]	45 [9]

Source: Census of Canada, 1871 Volume 1. Table VI- "Population of Cities and Towns having over 5, 000 inhabitants compared" and Volume 3. Table LIV. "Aggregate Value of All Industries in each District". * Rank Totals were calculated by averaging rankings in columns A. through E

Table 2 — Percentage of Total Population Engaged in Industry Among Canadian Cities With Over 10 000 Population, Canada, 1871.

Top 5 Cities	% pop. in Industry
Hamilton	21.6
Montreal	20.7
Toronto	18.9
Ottawa	14.8
London	14.6
Saint John	14.2

Source: Elizabeth Bloomfield and G. T. Bloomfield, Research Report No. 12, "Patterns of Canadian Industry in 1871: An Overview Based on the First Census of Canada" (Department of Geography, University of Guelph, 1990), 55.

The Character of Hamilton's Early Industrialization

How representative of the overall industrialization of the province or the country was the model of industrialization identified chiefly by the "new" generation of Canadian labour historians in their studies of large urban areas?[22] Craig Heron, for example, has noted that the new labour history has

> … presented the Ontario evidence within a universal paradigm of industrial capitalist development … the formation and struggles of the working class seemed to unfold in a pattern roughly similar to those in most other industrializing areas of the world in the period, particularly Britain and the United States. By extension, readers might also easily assume that the wider experience in Ontario was simply Toronto and Hamilton writ large.[23]

The view that the capital-intensive, specialized industries visible in large urban centres typified industrial development has been challenged in recent years by a growing body of research on Ontario that suggests that an impressive degree of industrial growth was achieved in the middle decades of the nineteenth century by the astute and highly selective efforts of small producers to service the growing staple economy and, perhaps more important, to supply the niche markets generated by its many linkages. The result was a type of industrialization characterized by flexible, specialized enterprise functioning in limited markets and tooled to meet the need for product diversification. "Modern Industry," as it existed in such centres as Toronto or Montreal by

22 The "new social historians" include Gregory S. Kealey, *Toronto Workers Respond*; Bryan D. Palmer, *Culture in Conflict*; Kealey and Palmer, *Dreaming of What Might Be*.

23 Craig Heron, "Factory Workers," 484.

this point, was still the exception and not the rule in overall industrial development.[24]

However, as this description of Hamilton's industrialization suggests, the size and importance of industry had meaningfully changed the structural context within which local craftsworkers pursued their livelihoods over the fifteen or twenty years before the early 1870s. Disaggregating this impressive portrait provides a more nuanced understanding of just how much "change" Hamilton's early industrialization actually entailed.

The adoption of uneven and combined development as a limited international research agenda was outlined earlier. In the Canadian context, historians have been slow to adequately integrate the insights of this approach into their analyses. One particular feature of the Canadian literature has been the improper consideration of the stages of industrial capitalist development. For example, inspired by the foundational work of Raphael Samuel, both Bryan Palmer and Gregory Kealey lay the groundwork for their respective studies of Hamilton and Toronto by providing accounts of each city's combined and uneven industrialization. This involved, in both cases, the charting of the industrialization process through broad Marxian categories of primitive accumulation/handicraft production, manufacture, and modern industry. Both authors give some lip-service to the idea that the co-existence of large, medium, and small industries would have had a pronounced effect on social experience in their respective cities, but do not meaningfully integrate this observation into their analysis. Both authors conceive of these stages of industrial development *sequentially*, treating the stage of modern industry as an end-point that had been reached in their localities by the initial dates of their studies. Palmer provides the most rigidly sequential interpretation in his study of Hamilton's industrialization. He characterizes the years before 1853 as the period of "primitive

24 In Ontario, industrialists' ability to expand and specialize their production facilities remained constrained by limited domestic markets up through the latter decades of the nineteenth century. Elizabeth Bloomfield and Gerald Bloomfield, for example, have shown that in 1871 the aggregation of these small producers accounted for the lion's share of industrial output in the province. The mean size of industrial establishments that year was still less than five workers. Other important discussions of Ontario's economic growth and market limitations include Douglas McCalla, *Planting the Province: The Economic History of Upper Canada, 1784-1870* (Toronto: University of Toronto Press, 1993); McCalla and Peter George, "Measurement, Myth and Reality: Reflections in the Economic History of Nineteenth Century Ontario," *Journal of Canadian Studies* 21, no. 3 (Fall 1986): 71-86; and Ben Forster, "Finding the Right Size: Markets and Competition in Mid- and Late Nineteenth Century Ontario," in Roger Hall, William Westfall and Laurel Sefton MacDowell eds., *Patterns of the Past: Interpreting Ontario's History* (Toronto & Oxford: Dundurn Press, 1988), 150-73. For Elizabeth Bloomfield and Gerald Bloomfield's findings based on the quantification of the industrial schedules of the 1871 census, see *Industrial Leaders: The Largest Manufacturing Firms of Ontario in 1871* (Guelph: Department of Geography, University of Guelph, Canadian Industry in 1871 Project, 1989) and their numerous other papers in this series.

accumulation," followed closely by period of "manufacture proper" which spanned about the next decade and a half. He continues,

> By the early 1870s, when Hamilton first attained the reputation it would vigorously defend in later years, as "the Birmingham of Canada," the transition to the final stage of capitalist development, what Marx referred to as Modern Industry, was completed.[25]

Both Kealey's and Palmer's studies are predicated on the understanding that craftsworkers' behaviour was informed by a social experience derived from the overwhelming material experience of Modern Industry, a context with such features as "large concentrations of workers," "extensive mechanization," and "an elaborate division of labour." It is at this point that textured analyses of overlapping phases of development become confounded in the teleology of the mass production model, and obscure from theoretical view the social experience of actors in economies developing along alternate roads of industrialization.

A few historians have seen around this. As some of the international literature has suggested, stages of industrial development must be considered *concurrently* both in industrial growth and in the social consequences of that growth. Ian McKay has made this suggestion most forcefully in his study of the Halifax baking and confectionery industry. McKay seriously considers the impact of stratification within the mode of production in examinations of the social experience of craftsworkers in early industrialization. However, his suggestion that pursuing this line of inquiry might "be the beginning of an explanation of the stability of nineteenth century Canadian capitalism" has largely been ignored in subsequent Canadian historiography.[26]

In the right combination, concurrent stages of industrial growth can produce an economic context in which much had changed but within which there can exist an experience of continuity. Profound change in industry can take place without entering into the phase of mass production or the stage of

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25 Pointing to such industrial concerns as Wanzer's, Wilson, Bowman and Company, Gardner & Company, the Copp Brothers' Foundry, and McPherson's Boot and Shoe Manufactory, among others, Palmer does concede that these establishments were "interspersed with innumerable smaller concerns," but fails to integrate this observation into his overall analysis of the social relations of production. See Palmer, *Culture in Conflict*, esp. 12-17. This is also evident in Kealey's study. For example, after providing probably the most detailed portraits of uneven industrial growth yet produced in the historiography, Kealey proposes that "by the 1870s modern industry had come to Toronto." While he does go on to declare that "the unevenness of industrial development had major repercussions for the emerging working class movement," this insight does not fundamentally influence his subsequent discussion. See Kealey, *Toronto Workers Respond*, 24, 30.

26 Ian McKay, "Capital and Labour in the Halifax Baking and Confectionery Industry." A major exception to this is Craig Heron, "Factory Workers."

"Modern Industry." The tremendous change discernible in Hamilton industry by the early 1870s occurred as a result of concurrent stages of industrial growth. But instead of "Modern Industry" co-existing with other stages of production, it was the advanced stage of "manufacture" juxtaposed with more traditional craft production that characterized the city's combined and uneven development.

One integral component of analyses which presume the dominance of modern industry on craftsworkers' social experience is the idea that industrial capitalism brings along with it a smaller number of larger enterprises. As a result of this, one major way craftsworkers have been presented as being proletarianized is by becoming unable to achieve self-employment, the traditional end-point of apprenticeship and journeywork. By this measure, if the logic of industrialism had truly reached the stage of modern industry in Hamilton by the early 1870s, one indicator would be a drying up of opportunities for self-employment for craftsworkers, expressed in an overall reduction (and coincident increase in size) of the number of industrial establishments in the city.

The available evidence does not support this trend. For example, using the data collected by Michael Katz and his associates in their study of the city between 1851 and 1871, Table 3 shows that the number of masters and manufacturers substantially increased in a wide array of industrial sectors between 1851 and 1871. Only two sectors, cabinet and jewellery making, show a decline in opportunities for self-employment, and in both cases this decrease was slight. Overall, by 1871 opportunity for self-employment for master/manufacturers had increased 107% from 1851 and (a still significant) 32 percent from 1861. Even self-employment opportunities in so-called "declining trades" such as boot and shoe making and tailoring still recorded comfortable increases. Self-employment opportunity was also still expanding in the metals industry, the leading sector of Hamilton's industrializing economy. While some constriction of opportunity had occurred in this sector over the previous ten years, the twenty-year measure still shows expansion. When aggregated with opportunities in blacksmithing and machine production, the city's larger metals sector shows comfortable growth in opportunities for self-employment by both the ten and twenty year measures. Many sectors reported quite marked increase in opportunity. The number of master/manufacturer coopers, "other construction," printers, broom makers, tailors, musical instrument makers, and "others" in the city increased between 100% and 500 % over these twenty years. The number of bakers, butchers, tobacconists, and marine producers in the city underwent a phenomenal expansion of over 500 % each. By 1871, the number of Hamiltonians self-employed in industrial pursuits was still on the increase.

The depth of Hamilton's combined and uneven development is best appreciated by outlining in some detail the co-existence of small, medium, and large

Table 3 — Demographic Characteristics of Masters and Manufacturers, Hamilton,1851-1871

	Number Masters/ Manufacturers			
				% Change
Trade	1851	1861	1871	1851-71
Bakers	4	16	25	525
Butchers	1	9	14	1300
Blacksmiths	10	12	14	40
Coopers	1	3	3	200
Builders/ Carpenters	26	25	39	50
Other Construction	14	23	36	157
Metal	26	33	29	11
Cabinet	14	11	12	<14>
Printers	6	15	13	116
Coach	7	8	8	14
Broom	2	3	6	200
Boot and Shoe	17	28	30	77
Tailors	14	26	38	171
Tobacconists	1	5	9	800
Marble	0	1	1	ind.
Harness and Saddle	5	5	8	60
Jewelers	8	5	6	<25>
Marine	1	3	9	800
Musical Instrument	3	9	9	200
Machinery	3	7	13	333
Other	18	37	52	189
Totals	181	284	374	107

Source: Michael B. Katz, Michael J. Doucet and Mark J. Stern, *The Social Organization of Industrial Capitalism* (Cambridge Mass.: Harvard University Press, 1982). Adaptation of Table 2.3. B.

enterprises in both aggregate and sectoral terms by 1871. The nature of the sources does not allow us to determine what the relationship was between smaller and larger industrial enterprise in the two decades preceding the 1870s.[27] But scrutiny of the 1871 census manuscripts is more revealing.

Table 4 examines the proportional dispersal of industrial establishments by workforce size in 1871. In aggregate it shows the small shop (employing 1-5) still dominant, accounting for over 50% of all local manufacturing establishments. Over 70% of industrial establishments still employed ten or fewer workers. The small shop was also still dominant in all seven leading industrial

27 The format of the 1851 and 1861 census does not allow quantification of this.

Table 4 — Number of Industrial Establishments, By Employment and Sector, 1871

	Employees, %(n)					
Sectors	1-5	6-10	11-25	26-50	51+	Total
Metal	44.9 (22)	20.24 (9)	6.12 (3)	10.20 (5)	20.41 (10)	100 (49)
Clothing	51.95 (40)	20.78 (16)	18.18 (14)	5.19 (4)	3.90 (3)	100 (77)
Wood/Paper	52.73 (29)	18.18 (10)	27.27 (15)	1.82 (1)	0 (0)	100 (55)
Agri Prod.	63.33 (19)	13.33 (4)	23.33 (7)	0 (0)	0 (0)	100 (30)
Construction	51.86 (14)	22.20 (6)	22.20 (6)	0 (0)	3.70 (1)	100 (27)
Chemical	66.67 (8)	16.67 (2)	16.67 (2)	0 (0)	0 (0)	100 (12)
Misc	56.52 (13)	13.04 (3)	17.39 (4)	8.7 (2)	4.35 (1)	100 (23)
All Sectors	**52.45 (171)**	**20.24 (66)**	**16.87 (55)**	**5.83 (19)**	**4.60 (15)**	**100 (326)**

Source: 1871 Census of Canada, Hamilton Industrial Schedules

Table 5 — Industrial Establishments By Employment, Distribution of Workforce, Value-Added Production, and Productivity, Hamilton, 1871

Workforce Size	n. est.	Emp. (n)	% Employ. in Industry	Value-Added [$]	% Value-Add in Industry	Productivity V-A/Emp.($)
1-5	171	460	8.01	297 795	10.85	647.38
6-10	66	509	8.87	301 208	10.97	591.76
11-25	55	927	16.14	510 713	18.61	550.93
26-50	19	691	12.03	331 017	12.60	479.04
51+	15	3156	54.95	1 303 950	47.51	600.07
Total	**326**	**5743**	**100**	**2 744 683**	**100**	

Source: 1871 Industrial Schedules

Note: The productivity calculation for the 51+ category does not include the 893 employees of the GWR, since financial particulars for that concern were not reported on the census.

sectors. Conversely, large shops (employing over 50), while undoubtedly an industrial form which had become the subject of much comment and speculation by local craftsworkers as to where industry might be heading, were still not numerous by 1871. Large shops accounted for under five percent of all establishments and were conspicuous only in the metals sector, but even there they comprised only about 20% of all metal shops.

This is not to argue that large establishments made only a marginal impact on the city's industrial landscape. As Table 5 demonstrates, in terms of value-added production and number of hands employed quite the opposite was true. Over half of all industrial employees worked in plants employing more than fifty hands, and these plants accounted for almost half of value-added production in the city. As the discussion below explains, what was remarkable about the city's larger industrial establishments was the fact that they were much

more often than not the small concern writ large, agglomerations of craftsworkers performing ranges of tasks well within the labour process typical of the small shop. They represent the appreciable amplitude of Hamilton's combined development, and underscore how a remarkable degree of industrialization can still structurally contain pre-existing social relations of production. It is also important to reiterate that, even by the above measures, smaller concerns were not insignificant. A third of all workers were employed in plants employing 25 fewer employees and through their labours they provided over 40 percent of all value-added production. Table 5 also shows that the larger shop appears to have made little headway in outstripping the productivity of its smaller counterparts.

It is easy to lose sight of the complexity of the overall industrialization process if the greater number of employees, or strong economic performance of larger industry is taken as sufficient evidence that an industrial economy was triumphantly nearing the end of its march towards modern industry. The temptation here – one repeatedly taken up by those eager to locate initial proletarianization – is to take this as evidence of the death-knell of the small concern. It ultimately would be, but not by the early 1870s. Small concerns were still appreciably important to the local industrial economy in their sheer number, in the numbers of their employees, and in their output. Proponents of the proletarianization thesis may retort that, while small concerns might have been numerically dominant, the "squeeze" was on – masters' incomes, journeymen's wages, and general business viability was on the edge. Consequently, small masters and their former charges alike were forced into wage-earning opportunities at larger, more modern, enterprise. But Hamilton's smaller industrial establishments were still economically viable concerns.[28] Neither in reality, nor in public perception, were small concerns feeling the "pinch" of advancing industrialization that the "proletarianization thesis" suggests.

The fact that large firms may have become dominant in terms of workforce size and the scale of their productive activity is also not, in itself, evidence of fundamental change in craftsworker experience. To problematize one popular "measure" of proletarianization one must ask if Hamilton's industrialization meant a decline in skilled trades by the early 1870s. It did not (see Table 6). Coach making was the only trade considered by Katz and associates that showed a decline in number of workers employed between 1851 and 1871. Employment in all other trades increased by about 90% overall from both 1851 and 1861 levels. The city's metal industry fared particularly well. Over 80% more blacksmiths found employment in 1871 than ten years earlier. Metal workers experienced well over a 100% increase in their number by both ten and twenty year measures. The number of machinists in the city increased a phenomenal 810% over the twenty years since 1851 and a still impressive 270%

28 Kristofferson, *Craft Capitalism*, Chapter 2.

Table 6 — Occupational Growth/Decline, Craftsworkers, Hamilton, 1851-1871

	Number of Craftsworkers			
				% Change
Trade	1851	1861	1871	1851-71
Bakers	61	62	72	18
Butchers	35	25	66	89
Blacksmiths	113	81	147	30
Coopers	14	10	42	200
Builders/ Carpenters	292	337	504	73
Other Construction	162	222	292	80
Metal	135	136	286	112
Cabinet	80	75	138	73
Printers	59	74	109	85
Coach	65	35	44	<32>
Broom	8	13	43	438
Boot and Shoe	204	143	209	1
Tailors	155	115	183	18
Tobacconists	13	16	75	476
Marble	40	20	42	5
Harness and Saddle	29	24	55	90
Jewelers	19	23	28	47
Marine	2	3	12	500
Musical Instrument	1	1	11	1000
Machinists	50	123	455	810
Other	63	73	242	284
Totals	**1600**	**1611**	**3055**	**91**

Source: Michael B. Katz, Michael J. Doucet and Mark J. Stern, The Social Organization of Industrial Capitalism (Cambridge Mass.: Harvard University Press, 1982). Adaptation of Table 2.3. B.

from 1861. Respectable increases are also evident in a variety of other sectors. That industrialization may have actually increased, or in some cases, created skilled positions have been central to the findings of such historians as Richard Stott and Raphael Samuel.[29]

The persistence of skilled trades itself throws into question the extent to which the division of labour had progressed by this time. An examination of the leading sectors of Hamilton's industrial economy confirms that early industrialization had only a marginal impact on the work routines and opportunities for craftsworkers by the 1870s and brings further scrutiny to the nature of

29 See, for example, Samuel, "Workshop of the World;" and Richard Stott, "Artisans and Capitalist Development," 105.

Table 7 — Metal Sector, By Employment, Hamilton, 1871

	Estab.	Employees		Value-Added		Steam Power	
Employees	(n)	(n)	[%]	[$]	[%]	n	[%]
1-5	22	63	3.32	35 187	3.00	4	18.19
6-10	9	69	3.64	35 339	3.01	5	55.56
11-25	3	56	2.96	49 365	4.21	3	100.00
26-50	5	172	9.08	118 600	10.11	5	100.00
51+	10	1535	81.00	934 500	79.67	10	100.00
Total	**49**	**1895**	**100.00**	**1 172 991**	**100.00**	**27**	

Source: 1871 Industrial Schedules. The 51+ category includes the GWR Locomotive Shops. See: Kristofferson, Craft Capitalism," Chapter 1 for a note on the method used for this determination.

Hamilton's combined and uneven development. While aspects of work had changed, much remained the same.

These trends can be seen in secondary metals, the leading sector of Hamilton's industrial economy. As Table 7 demonstrates, by 1871 the large shop dominated both in terms of hands employed and value-added production. Steam power was also well in evidence, universal in larger shops but also employed to a significant extent in shops with 10 or fewer workers. However, the agglomeration of large numbers of workers under one roof and the widespread use of steam power belies much continuity in production.

There was, for example, little link between the large concentrations of workers in larger shops and either elaborate divisions of labour or forms of modern machinery that effectively robbed craftsworkers of their skills. The GWR locomotive shops, for example, may have been the largest employer in the secondary metal sector, using some of the country's most modern technology and employing in abundance such recently created occupational groups as machinists and fitters. But up through the early 1870s, in both newly-created and more traditional trades, GWR production remained centered on the all-round skills of the well-trained craftsman. The culture of the shop floor was imbued with intricate job hierarchies that both closely approximated and were likely understood in terms of more traditional craft mobility patterns. Similarly, while work at Great Westerns' adjoining rolling mills made use of giant steam-powered hammers, rollers, shears, "and a dozen other mechanical arrangements," it also relied heavily on the manual skills of such new trades as puddlers, rollers, heaters, catchers, and roughers.[30] Both the GWR Locomotive shops and the rolling mill created new skilled positions and expanded opportunity in craftswork.

30 *Times*, 19 November 1864. See also Craig Heron, *Working in Steel: The Early Years in Canada, 1883-1935* (Toronto: McClelland & Stewart, 1988), 34-40; Heron, "Factory Workers," 501, 507-08; and Samuel, "Workshop of the World," 43-4.

There is compelling evidence to suggest that the characterization of the GWR shops as "an artisan manufactory, enlarged to grandiose proportions"[31] is overdrawn. Paul Craven and Tom Traves, for example, have demonstrated the organization of work for the GWR shopcrafts to have "more closely resembled the industrial than the artisanal model." While the movement towards such forms of work organization is not disputed, continued respect for and practices of craft training, mobility, and culture rooted these workers in a productive arrangement that, while a departure from it, was still understood through the lens of craft. As Craven and Traves suggest, work in and around the GWR was "transitional" between the "personal labour relation and the newly emerging corporate paternalism."[32] In this situation, the momentum of the past and the situation of these workers in a greater local context that itself exhibited important continuities in craft,[33] would have had a profound influence on the formation of shopworker's subjectivties within the bounds of the more familiar craft world.

The city's foundry operations were another particularly strong component of the metals sector. A number of these concerns, including the McNab Street, Empire, and Gurney foundries and the L.D. Sawyer Agricultural Implement Works employed workforces of well over 50 men. Wherever possible, they also employed the latest technology, powered by steam. A visitor to the Sawyer Works in 1869 boasted, for example, that "the mechanical contrivances at work in the Factory are in the highest degree ingenious and all the latest improvements and inventions have been taken advantage of …."[34] However, as a number of studies have noted, moulders' skills remained largely intact through this time period. Employers also had very limited success by this point at hiving less-skilled aspects of moulders' or patternmakers' work off into less-skilled occupations such as stovemounter, coremaker or fitter.[35]

Part of the reason employers had not done more to whittle away at the work routines of their patternmakers and moulders was the flexible specialization demanded by limited markets. Product specialization still lay in the future for Hamilton foundry operations by the early 1870s. The 101 men and boys working at E.&C. Gurney Company – ostensibly a "stove foundry" – also produced

31 See Palmer, *Culture in Conflict*, 15.

32 Craven and Traves, "Dimensions of Paternalism," 53, 69.

33 Kristofferson, *Craft Capitalism*, Chapter 4.

34 *Spectator*, 9 June 1869.

35 For the persistence of the work routines of moulders and an explanation of the mechanization of this craft in the early twentieth century, see Kealey, *Toronto Workers Respond*, 28-9 and 64-82; W. Craig Heron, "Working Class Hamilton, 1895-1930" (Ph.D. Dissertation, Dalhousie University, 1981), 127. The Archivanet on-line 1871 census lists only 2 stovemounters and no coremakers in Hamilton in 1871. The 28 fitters of the city were likely dispersed widely across a number of shops and, while not yet a common feature, portended things to come. See also Heron, "Factory Workers," 502-3.

fire-place grates, hot air furnaces, hot air registers, and agricultural furnaces and did an appreciable business in custom castings, especially for the R.M. Wanzer Sewing Machine Company. Also producing sewing machine castings was James Stewart's McNab Street Foundry, where the product line included stoves and a variety of railway, engine, and other machine castings. Dennis Moore's product line included stoves, tinware, machinery castings, and agricultural implements. The Mary Street foundry turned out stoves, ploughs, cultivators, machine and engine castings, and engine fittings. The Hamilton Malleable Iron Works turned out all types of castings as well as wagon, carriage and saddlery hardware, and added stove production some years later.[36] Agricultural implement producers such as L.D. Sawyer still turned out an impressive array of agricultural implements and machinery, including reapers, grain-drills, threshing machines, clover boxes, horse hay forks, and a variety of other agricultural implements.[37] These diversified production runs still demanded the adaptable skills of the "all 'round" moulder or patternmaker.

Product specialization was exhibited by Hamilton's thriving sewing machine manufactories. The relatively short life of this industry (induced by a temporary patent loophole and virtually extinct by 1880) speaks to the folly of such specialization before adequate market consolidation. This specialized industry was also a boon for craftsworkers, likely providing the lion's share of the growth in well-paying machinists' positions outlined in Table 7. The work culture of the machinist was also well-preserved in these plants.[38] And, even in a work environment of power planers and lathes, high speed emery wheels, polishing, finishing, and milling machines, it remained the skilled hand and personal discretion of the machinist that guided production.[39]

Those industries that grew up to provide the industrializing metal industry with its machinery and motive power did not exhibit much foreordained tendency towards mass production. Rather, the flexible skills and manual dexterity of the craftsworker remained central to the production of special-purpose machinery for industry.[40] This was evident in Hamilton's burgeoning engine and boiler industry, dominated by the early 1870s by the Beckett family's Atlas Works, employing 120 men and boys. A large number of the steam engines and boilers that powered the manufactories of Hamilton and region were produced here from the mid-1850s. This was custom work. The machine shop, for exam-

36 *Spectator*, Carnival Edition (1886); *Times*, 30 September 1863; *Hutchison's Hamilton City Directory*, 1871-1872.

37 *Spectator*, 9 June 1869.

38 Kristofferson, *Craft Capitalism*, Chapter 4.

39 See *Spectator*, 1 May 1871 for a description of the Wanzer plant. For the maintenance of machinists' skills and customary work habits in Toronto see Kealey, *Toronto Workers Respond*, 28-29 and 77-9.

40 Sabel and Zeitlin, "Historical Alternatives to Mass Production," 138.

ple, contained an impressive variety of steam-powered machinery by 1865, including lathes and planers, drills, screw cutters, shears, and punching and rolling machines. But the firm still reported that "all varieties of machine work are executed to order." Boiler construction also relied almost wholly on hand methods up through these years. The Becketts themselves recognized that the efforts to expand their operations were limited "only by their inability to obtain a sufficient number of skilled workmen." The craft skills of the Becketts' workforce were also evident in the firm's diversity of output: stationary and portable engines and boilers of various horsepower for a wide array of uses in manufactories, agriculture, forestry, and oil production. In addition, the firm boasted of its ability to produce "pile-drivers, hoisting machines, pumps, sawing machinery, cranes, &c, &c. ... smithwork and repairs at shortest notice" as well as engines to drive threshing machines.[41] The motive power of Hamilton's industrialization and the specialized machinery it operated was created by hand.

The co-existence of small and large shops was another notable feature of the local metal industry. As Table 7 shows, the small concern was still the most common type of metal shop by the 1870s. It outstripped the large shop (employing 50 or more workers) by a factor of nearly four to one. Some traditional metal trades remained more or less unaffected by industrial growth. The chief business of the GWR rolling mills, the re-rolling of rails, did little to displace the traditional blacksmith from his local markets. Larger industry like the rolling mills or railway shops actually increased local demand for this trade.[42] Dennis Moore's large tin and sheet iron operation also appears not to have precluded the small shop as the almost universal unit of production in that industry. Again, opportunity for the skilled tinsmith could be found at both these levels.[43]

The establishment of large enterprise could also provide opportunity to the small producer. A number of small machine shops serviced the specialized machinery needs of local industry. The machinist John Leitch, for example, turned out "machinery of various and many kinds." The Hamilton Iron Works performed custom engine and boiler fabrication and repair. Samuel J. Moore concentrated efforts in his small shop on the production of tinsmith's tools. A number of other small producers eagerly inserted themselves into the new niche markets of the industrial economy. Alexander Howie geared his small brass foundry to the production of sewing machine attachments for local large pro-

41 *Times*, 5 October 1863, 27 June 1865; *Spectator*, 15 September 1865; *City Directory* (1871-1872); Samuel, "Workshop of the World," 42.

42 The city's five blacksmithing establishments reported on the 1871 Industrial Census were uniformly small, employing between one and six hands each. Notably, 120 blacksmiths are listed on the Archivanet 1871 census database for the city.

43 Hamilton's tin and sheet iron products and tinsmithing subsectors in 1871 employed 1-5 hands, except D. Moore, who employed 30 hands in his tin, japan, pressed ware, and copper operations.

Table 8 — Clothing- Boot & Shoe Subsector, By Hands Employed, Hamilton, 1871

	Establishments		Employees (n)		Value-Added	
Employees	(n)	[%]	(n)	[%]	[$]	[%]
1-5	17	73.90	48	14.59	25 885	16.34
6-10	2	8.70	16	4.87	8 000	5.05
11-25	2	8.70	41	12.46	22 513	14.21
26-50	1	4.35	49	14.89	22 000	13.89
51+	1	4.35	175	53.19	80 000	50.51
Total	**28**	**100.00**	**329**	**100.00**	**158 398**	**100.00**

Source: 1871 Industrial Schedules

ducers. The blacksmith Samuel Spears performed ship work as part of the burgeoning boat building and repair industry that grew around the Great Western's port operations after the mid-1850s. Similarly, by 1871 Benjamin Greening's modest wire works turned out product for both the GWR and the rigging needs of local lake traffic.[44] One aspect of the industrialization of Hamilton's metal sector was the proliferation of small producers.

Varieties of this type of industrial development were also well in evidence in the two leading sectors of the city's clothing industry, boots and shoes and clothing and tailored goods. Perhaps more than any other industrial subsector, the local boot and shoe industry exemplified the true breadth of combined and uneven development (see Table 8). At one extreme was the massive manufacturing operation of John McPherson and Company. This plant employed 175 hands by 1871 and was singular in this industry in its use of steam power to run its "profusion of machinery," including cutting, heel pressing, sewing, pegging, and sole sewing machines. As one 1865 visitor remarked with glee, "the old method of hand work had been completely superseded." But even in the overwhelmingly mechanized environment of boot and shoe production, the craft skills of the shoemaker were adapted – and, admittedly, narrowed – into such new but skilled occupational categories as laster, which remained embedded in the labour process for some time to come.[45] It was still common for the traditional shoemaker to find opportunity as a foreman or superintendent inside this plant. Practitioners of "new skills" also inhabited the same social universe as more traditional craftsworkers, largely erasing the hard-and-fast distinctions

44 This information was culled from product descriptions provided on the 1871 Industrial Schedules.

45 *Times*, 20 July 1863, 7 August 1865, 17 October 1867; *Spectator*, 19 December 1864. See also Kealey, *Toronto Workers Respond*, 28 and 37-52; Heron, "Factory Workers," 504; Mary H. Blewett, *Men, Women and Work: Class, Gender and Protest in the New England Show Industry, 1780-1910* (Urbana: University of Illinois Press, 1990).

Table 9 — Clothing Sector — Clothing and Tailored Goods Subsector, By Employment, 1871

	Establishments		Employees (n)		Value-Added	
Workforce Size	(n)	[%]	(n)	[%]	[$]	[%]
1-5	11	39.29	37	5.18	14 650	7.48
6-10	7	25.00	54	7.56	20 200	10.32
11-25	7	25.00	112	15.69	40 973	20.92
26-50	2	7.14	56	7.84	20 000	10.21
51+	1	3.57	455	63.73	100 000	51.07
Total	**28**	**100.00**	**714**	**100.00**	**195 823**	**100.00**

Source: 1871 Industrial Schedules

between the two. Operations of this size that used these more advanced divisions of labour did represent marked change from traditional craft production, but the social relations craftsworkers practised within their walls were still configured to the craft mode of production.[46]

The McPherson operation must also be considered for its solitary existence in a sea of much smaller boot and shoe enterprises (out of which it had itself emerged), all of which relied on the manual power to drive their operations. Custom work and repairs were still the core business of the overwhelming majority of establishments in this sector. The large differences that Kealey found existing between Toronto's large and small boot and shoe producers by 1871 in terms of concentration of workers and value-added production also appear to have been less intense in Hamilton by this year.[47]

This disparity of industrial development was also well in evidence in the clothing and tailored goods subsector of the local clothing industry (See Table 9). Production at the city's only large clothing plant, the ready-made clothing operations of Sanford, McInnis and Company, was typified more by division of labour than by mechanization. An extensive outwork system had developed, using the flexible domestic skills of hundreds of female operatives who stitched together pre-cut cloth picked up at the factory door or from a local subcontractor into garments in the "sweated" comfort of their own homes. The Sanford, McInnis operation, however, had done little to diminish the custom work of traditional tailors, who existed in greater numbers than ever before, plying their trade inside either the small shop or in the slightly larger establishment of the merchant tailor. The number of tailors in Hamilton increased 180% in the ten years prior to 1871.[48] The ready-made clothing industry also helped add to the

46 Kristofferson, *Craft Capitalism*, Chapters 2, 3, 4.

47 Kealey, *Toronto Workers Respond*, 28, Appendix I, Table 1.3.

48 289 tailors are listed on the 1871 census, as opposed to 103 in 1861.

Table 10 — Wood/Paper Sector, By Employment, Hamilton, 1871

# Establishments		# Employed		Value-Added		Steam Power	
	(n)	(n)	[%]	[$]	[%]	n	[%]
Employees							
1-5	29	74	7.08	31 083	12.60	2	6.89
6-10	10	76	7.27	44 125	17.89	2	20.00
11-25	15	259	24.80	141 125	57.35	8	53.33
26-50	1	36	3.44	30 000	12.16	1	100.00
51+	1	600	57.42	n.a		1	100.00
Total	**56**	**1045**	**100.00**	**1 172 991**	**100.00**	**14**	

Source: 1871 Industrial Schedules. The 51+ category includes the GWR Car Shops. .

ranks of skilled clothing workers through the creation of such newly skilled positions as cutter, fourteen of whom were on the Sanford, McInnis payroll by 1871. The combined and uneven development exhibited in Hamilton's clothing and tailored goods sector would remain a feature of sections of the larger national industry for decades to come.[49]

The wood and paper sector was dominated by the car shops of the Great Western Railway. (See Table 10). By the early 1860s these shops already comprised the city's largest congregation of workers under its various rooves. Car builders, a "large and undifferentiated" section of the force at work within its walls, represented one of the city's most pronounced examples of work organized more on the industrial than the artisanal model. But mobility through the ranks expressed strongly at both the practical and the ideological levels in the shops and embedded in the "complicated supervisory structures" of this employer closely tracked the craft mobility traditionally familiar to craftsworkers. This was part of a larger paternalism that, while "transitional," was still likely more heavily informed – or "made sense" of – by understandings derived from more decidedly artisanal contexts. As a whole, the car shops were also not an undifferentiated operation. Car builders applied their skills to the production of a still wide array of cars, tenders, and other products. But also at work in these shops were large numbers of more traditional craftsworkers — cabinetmakers, carpenters, upholsterers, painters and more – whose capacity for artistic finish gained these shops their renown. The environment in which these

49 *Times*, 21 July 1863, 23 June 1871. The combined and uneven development of Canada's larger clothing industry is further outlined in Mercedes Steedman, "Skill and Gender in the Canadian Clothing Industry, 1890-1940," in *On The Job*, eds. Craig Heron and Robert Storey, 162-76; Steedman, *Angels of the Workplace: Women and Gender Relations in the Canadian Clothing Industry, 1890-1940* (Toronto: Oxford, 1997); and Ruth A. Frager, *Sweatshop Strife: Class, Ethnicity, and Gender in the Jewish Labour Movement of Toronto, 1900-1939* (Toronto: University of Toronto Press, 1992).

men laboured was a departure from the past, especially in its scale. But the tools and work processes of the past were still apparent. The blanket of paternalism that overlay the whole operation along with its strong ideologies and practices of career mobility did not yet represent a fundamental departure from the personal labour relationship and craft mobility patterns that characterized artisanal production.[50]

Aside from the GWR car shops, the wood and paper products sector represented the appreciable contribution to aggregate output that could be made by a sector of generally modest-sized producers (see Table 10). The total output of these smaller producers was also spread over a number of subsectors, including broom and brush making, cabinet and furniture making, carriage making, and musical instrument manufacture.[51] C.W. Meakins and Sons, the city's largest brush manufacturer, employed 36 hands, powered their plant with a 15 h.p. steam engine, divided labour among numerous departments and employed "a large number of girls" to draw hair or fibre through bored wood cut to size and prepared by semi-skilled male operatives on a variety of belt-driven woodworking machinery. The eighteen employees of Alfred Green, the city's second largest brush manufacturer, by contrast, performed their work by foot power. Similarly, Allan Easson's twelve men and boys used their manual skills to prepare and assemble both brushes and brooms. This plant's traditional handicraft operations were evident to one visitor to the Easson plant in 1868 who observed the firm's proprietors labouring away at the bench alongside the firm's other workers, all wearing "short aprons of leather, and secure a very lively fraternity when at work." As the largest of Hamilton's several broom manufactories in 1871, the wedding of broom-corn, twine, and wire to maple, beech or basswood handles was still wholly executed by the hands of the "craftsman."[52]

Steam power was in evidence at a couple of the larger cabinet and furniture making establishments in the city. Interestingly, James Reid, the proprietor of the largest of these establishments, turned out his line of "the very best and finest description of furniture" by exclusive reliance on the hand power of his 24 skilled cabinet-makers. Hamilton's furniture industry did not approach the scale, divisions of labour, or degree of mechanization of some other Ontario furniture operations by 1871.[53] This situation was repeated in the local musical

50 *Times*, 1,2,3,4 September 1963; *Canadian Illustrated News*, 14 February 1863; Craven, "Labour and Management on the Great Western Railway," 347-355; and Craven and Traves, "Dimensions of Paternalism," 52-60.

51 Subsectoral weightings as a proportion of value-added production within the wood/paper sector in 1871 are as follows: Brooms/Brushes (22%); Cabinets/Furniture (17%); Carriages (13%); Musical Instruments (18%); All Other wood/paper (20%). See Kristofferson, *Craft Capitalism*, Chapter 1.

52 *Times*, 11 July 1871; *Spectator*, 2 January 1868.

53 This should especially be contrasted to the Jacques and Hay facility in Toronto. See Kealey *Toronto Workers Respond*, 19-20.

instrument industry. The hand was again the motive power at Charles Thomas' piano manufactory, the largest such establishment in this subsector. The variety of skills exercised by his 15 men was reflected in Thomas' boast that "his instruments are entirely built in his establishment, from the ripping of the lumber to the last finishing touch." A couple of slightly smaller piano and organ manufacturers did use steam to power their operations by 1871, but this appears to have simply aided the skilled piano-maker in his work. While he had installed some steam-driven machinery, for example, Thomas White reported his "twelve to fourteen skilled craftsmen are converting wood and metal into shapes, and putting pieces together in complex forms, which the uninitiated may well declare to be incomprehensible …."[54]

The local carriage and wagon industry was composed of an assortment of small and medium size producers, with no establishment employing more than 25 workers. The sizable works of Jean Pronguey and Thomas McCabe, employing 20 and 14 men respectively, were still both entirely manual operations The largest of these establishments, Henry Cooper's Hamilton Coach Factory, was capitalized at $30 000, used a ten horsepower steam engine, and organized its operations on a departmental basis. But, like other mid-nineteenth-century Ontario carriage works, Cooper's operation appears to have been a conglomeration of artisan-based operations – some of which were independent concerns in their own right – which shared resources and worked on each other's jobs. Cooper's own premises were full of carriage-makers, trimmers, and other craftsmen expert in carriage building, but adjoining the plant – and sharing its steam power – were also George Grayson's carriage-spring manufactory and the Aitchison Brother's planing mill and box factory. As David Burley has noted, such arrangements might have consolidated the stages of production, "but did not change the means of production *per se*."[55]

A few operations outside of the leading sectors of Hamilton's industrial economy contributed significantly to value-added production in the city. Two of these subsectors – tobacco and glass manufacture – deserve brief examination here. The 48 workers employed by George Tuckett and John Billings used the power of a 15 horsepower steam engine to press tobacco into plug form inside their plant. But equally large were the establishments of Frederick Schwarz and E. Barber and Company, whose plug tobacco was produced in

54 *Spectator*, 17 May 1861, 25 February 1868.

55 The self-description of the Hamilton Coach Factory in the 1871-72 city directory presents the Grayson and Aitcheson concerns as part of the firm's operations. Neither Grayson nor the Aitchesons were listed on the industrial census schedules that year. However, both these concerns advertised and appeared to accept orders in their own right. The Aitcheson concern emerged as its own sizable operation some years later. For a description of the artisanal pooling of skills before the advent of the modern integrated industrial operation in the nineteenth century Ontario carriage industry see Burley, *A Particular Condition in Life*, 31-3.

manually operated presses. The traditional hand-rolling skills of the cigar maker were also still practised in the number of cigar manufactories which co-existed in roughly equal numbers to plug and cut tobacco producers during these years. George Tuckett himself oversaw operations in both sections of this industry. Cigar making itself was not affected by the mechanized press for some years to come.[56]

Eighty-three men and boys turned out a yearly product worth $85 000 from the sizable works of the Hamilton Glass Company, capitalized at $40 000 by 1871. But this concentration of hands under one roof had done little to alter the labour process. It was the skilled glassmaker who continued to mix together lime, soda, ash, and sand with great precision before firing it and handing it over to be blown into moulds for telegraph insulators or bottles of a wide array of shapes, sizes and colours. Hand-blowing methods remained common in Hamilton glass factories until the early twentieth century when the first automatic bottle-making machines were introduced.[57]

What emerges from the above examination is a preliminary appreciation of the structural dimensions of Hamilton's combined and uneven industrial development by the early 1870s. Small and medium sized concerns were still plentiful across all sectors.

The continued viability of the smaller concern in the context of advancing industrialism was also reflected in a continued expansion of self-employment opportunities. These remained generally profitable concerns which showed little sign of being "done in" by the larger players in their sectors. By 1871, the small concern still remained the city's dominant form of industrial proprietorship.

Larger shops did dominate in terms of value-added production and numbers of hands employed, but they could not on average boast productivity superior to that of their smaller counterparts. Size appears to have had only limited connection to the institution of the various elements of "modern industry." The skills of the craftsworker were preserved across all industrial sectors, so the decline of skilled trades was not a common feature of Hamilton's industrial landscape. Overall demand for craftsworkers was on the increase both as a result of the expansion of traditional skilled occupations and the creation of various "new skilled" occupational categories. In some cases, production in large shops had been re-organized and modern machinery introduced. With rare exceptions, this did little to lower demand for the skilled hand of the craftsworker. Machinery often simply aided the mechanic in his more or less traditional labour process –

56 *Times*, 8 September 1863, 17 July 1867; *Spectator*, 30 December 1863, 11 July 1871; Kealey, *Toronto Workers Respond*, 29.

57 *Times*, 13 September 1864; *Spectator*, 15 April, 29 August 1871, 8 December 1924; Miss Lottie M. Jones, "Early American and Canadian Glass" *Wentworth Bygones* (1975): 57; Samuel, "Workshop of the World," 32-4.

frequently lessening the physical demands of his work. Even in large firms where the march towards modern industry was most advanced, factory owners still relied on craftsworkers at crucial stages in their plant's production process and in its management.[58] In those few sectors that did approach mass production – most notably boot and shoe making – the craftsworker still found a place in larger enterprise. Establishments such as McPherson's also did little to sink the expanding opportunity of the shoemaker, who found his niche in the custom work of that subsector's smaller establishments.

The impressive expansion of the city's industrial activity by the early 1870s occurred within a larger context of limited markets and variable demand that did not yet signal a large-scale transition to "modern industry."[59] The demands of Ontario's modernizing and expanding economy were still most effectively met by enterprise organized more or less along traditional craft lines, with flexible specialization as its hallmark. Weak and variable demand also commonly meant that large enterprise did not preclude the existence of the small shop. In fact, the hindrance of large, integrated operations by limited markets could spell opportunity for smaller firms eager to insert themselves in the production chains of larger operations, such as small shop machinist Alexander Howie's manufacture of attachments for one of the large local producers of sewing machines. Some industries, notably carriage making and the local boat-building industry, increased output by combining the productive capacities of several independent craft-based concerns. In all, Hamilton's impressive degree of industrialization by the early 1870s had been achieved through the preservation and adaptation of craft enterprise.

Who Led Hamilton's Industrialization?

Accounts of industrial growth should consider not just *stages* of economic development, but also *paths* to industrialization. A number of historians have noted that early industrialization entailed change for craftsworkers not just in *how* or *where* they worked, but also in for *whom* they worked. Studies of industrialization and class formation must take into account the social origins of those men who led the process. Understanding *who* these men (and, in rarer instances, women) were and how they fit in to the social relations of production is crucial to any understanding of continuity or change in the personal structures of industrialization. In many respects, inattention to this has led to a unidimensional social history of industrialization. This study suggests that the social origins of Hamilton's industrialists had a pronounced effect on the development of class relations in that city. First, however, the origins of this group need to be determined with some accuracy.

58 This point is explored in depth in Kristofferson, *Craft Capitalism*, Chapters 1, 2, 3.
59 Forster, "Finding the Right Size," 150-73; Heron, "Factory Workers," 495.

Karl Marx pointed towards two roads to industrialization, merchant and commercial redirection of capital into manufacturing or artisan-proprietor's expansion of their small handicraft operations into larger enterprise, which he dubbed the "really revolutionizing path."[60] However, the divergent social consequences of these two paths have not been adequately problematized, most labour historians being content to treat the "capitalist class" as a homogeneous category. Many studies of early industrialization in the United States concentrate on industries such as textiles, shoes, and primary iron and steel where merchant and finance capital was the driving force behind their establishment.[61] In Canada, this tendency has been exacerbated by scholarly efforts to show that merchants were not against industry. In their study of the making of Hamilton's "entrepreneurial class", for example, Katz and associates described the city's industrialization in the two decades before 1871 as following Marx's first path, being guided by "a stable group" of merchants and financiers who "sponsored the industrialization of the city."[62] Merchant hegemony over industrial enterprise, of course, is presented as one of the big "changes" brought by industrialization, and for many historians has provided a suitable backdrop for the consideration of "conflict" rooted in class differentiation.

American scholarship on the social origins of industrialists provides some of the deepest and most sustained examinations of the artisan-entrepreneur of Marx's second path.[63] Detailed studies of this sort are few and far between in the Canadian literature.[64] Studies of Ontario's early industrialization have only

60 By the first road, merchants re-directed capital from commerce into manufacturing, establishing "direct sway" over production by subordinating master artisans and other producers to their centralized control. By the second road master artisans took the "really revolutionizing path" by using accumulated capital to expand their enterprises and take to trade themselves. See Karl Marx, *Capital: A Critique of Political Economy*. Volume III (New York: International, 1967), 334. See also Maurice Dobb, *Studies in the Development of Capitalism* (London: Routledge, Kegan and Paul, 1946), 1963, Chapter 4.

61 Alan Dawley, for example, has outlined the process by which the small master shoemaker in Lynn, Massachusetts was "done in" by increasingly aggressive local shopkeepers after the turn of the nineteenth century, allowing industrialization of that industry to take place "under the auspices of merchant capitalism." Dawley, *Class and Community*.

62 Katz, Doucet and Stern, *The Social Organization of Early Industrial Capitalism*, 12, 18, 30-35, 51, 58-61, 161; Katz, *The People of Hamilton, Canada West*, 143, 196.

63 See, for example, Herbert Gutman, "The Reality of the Rags-To-Riches 'Myth': The Case of the Paterson, New Jersey, Locomotive, Iron, and Machinery Manufacturers, 1830-1880," in his *Work, Culture and Society in Industrializing America* (New York: Vintage, 1977), 211-33; Susan E. Hirsch, "From Artisan to Manufacturer: Industrialization and the Small Producer in Newark, 1830-60," in *Small Business in American Life*, ed. Stuart W. Bruchey (New York: Columbia University Press, 1980), 80-99; and Ross, *Workers on the Edge*.

64 In his study of Montreal entrepreneurship between 1837 and 1853, Gerald Tulchinsky has shown that merchants put off by long-term tie-up of capital left much of that city's early industrialization open to artisans, many of whom profited handsomely in their efforts to expand their operations. See Tulchinsky, *The River Barons* (Toronto: University of Toronto Press, 1977), esp.

hinted at the artisanal roots of some of the province's manufacturers.[65] Accounts of Hamilton's industrialists suggest that the entrepreneurial artisan may have found at least some place in the city's supposed merchant-led industrialization.[66] Other studies also suggest the artisanal beginnings of at least some city industrialists. Palmer indicates that at least some of Hamilton's industrialists took "the really revolutionizing path" to success, but does not expand on this theme and goes on to present Hamilton's employers as a static group against which a multidimensional and vibrant group of skilled workers fought for independence and control. John Weaver's excellent study of boosterism, technological diffusion, and regional economic development in the city's

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Chapter 12. It should be noted that Tulchinsky does not argue for a pervasive artisan-based industrialization, finding that merchants did invest in such sectors as transportation, shipbuilding and marine engine industries. T.W. Acheson has found that much early industrial growth in Saint John, New Brunswick, can be attributed to artisanal expansion. See T.W. Acheson, *Saint John: The Making of a Colonial Urban Community* (Toronto: University of Toronto Press, 1985).

65 Graham Taylor and Peter Baskerville have commented that "one would like to know more about the entrepreneurs who promoted industrial development in Upper Canada," going so far as to speculate that "[I]t may be that industrialists were primarily drawn from the crafts area." Graham D. Taylor and Peter A. Baskerville, *A Concise History of Business in Canada* (Toronto: Oxford, 1994), 179. Acheson has suggested that the likelihood of Canada's industrialists boasting artisanal origins increased as one moved west across the country. According to this account, manufacturers in the Lake Peninsula of Ontario could claim the most humble origins of any fraction of their class in any region of the country. See Acheson, "The Social Origins of the Canadian Industrial Elite, 1880-1885," in *Canadian Business History*, ed. David Macmillian (Toronto: McClelland & Stewart, 1972), 151. See also Jacob Spelt, *Urban Development in South-Central Ontario* (Ottawa: Carleton Library No. 57, 1972), 127-8; John McCallum, *Unequal Beginnings: Agriculture and Economic Development in Quebec and Ontario until 1870* (Toronto: University of Toronto Press, 1980), 91, 101; Douglas McCalla, *Planting the Province*, 115; McCalla, "Tom Naylor's A History of Canadian Business: 1867-1914 A Comment," Canadian Historical Association: *Historical Paper* (1976); and Burley, *A Particular Condition in Life*.

66 Katz's view of the industrialization of the city as having been facilitated almost completely through a simple re-direction of merchant and commercial capital to industry is based on the misreading of a single project working paper which itself suffers from serious methodological and conceptual flaws. For a detailed discussion of this see Kristofferson, *Craft Capitalism* Chapter 2. T.W. Acheson's study of the social origins of the Hamilton industrial elite between 1880 and 1885 reinforces Katz' findings and is based on a survey of only a very select group of Hamilton industrialists, most of whom entered into industry in response to the opportunity opened up by the National Policy. His conclusion that industrial expansion in Hamilton in the early 1880s "was simply a continuation of a process which had begun in the preceding generation" is also not backed up with any evidence – primary or secondary – from the pre-1880 years. In another study, however, Acheson does note the artisanal origins of such Hamilton area manufacturers as John and Alexander Gartshore, Thomas Wilson, Robert McKechnie and John Bertram. See Acheson, "The Social Origins of Canadian Industrialism: A Study in the Structure of Entrepreneurship," (Ph.D. Dissertation, University of Toronto, 1971), 194-9; Acheson, "The Social Origins of the Canadian Industrial Elite," 154-6.

early foundry industry provides the most thorough examination of the artisanal origins of some of Hamilton's – and indeed Canada's – industrialists presently available. But while Weaver's study was fairly thorough in its survey of the artisanal backgrounds of the city's founders, there still exists no comprehensive examination of the origins of the city's manufacturing class *per se*.[67]

How common was it for Hamilton industrialists to have risen from the ranks? Many of the above studies *hint* at this, but none can make this claim based on a thorough and rigorous social scientific survey of that class as a whole.[68] For the time period covered by this study the most comprehensive listing of industrialists available are the Industrial Schedules of the 1871 Census of Canada for Hamilton. This is a particularly rich and rare source since it provides a list of all Hamilton industrialists in a given year, from the major employers of hundreds of men and women to the traditional artisanal workshop operated by "self and son." It also allows a unique glimpse of the state of industrialization in Hamilton close to the terminal date of this study. However, it is a complex source that should be used with some caution.[69] To construct a database of the origins of the industrialists listed on the manuscripts I adopted a methodology closely resembling the one used by Herbert Gutman in his study of Paterson, New Jersey, and Steven Ross in his Cincinnati study by making the industrial schedules machine readable and cross-referencing them with local biographical sources for various manufacturers.[70]

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67 Weaver is also probably singular in the historiography in his speculation that the fact Hamilton foundrymen built their establishments out of their own sweat and handiwork might have had an effect on social relations by fostering a "spirit of co-operation and craft loyalty" as well as a "fraternal atmosphere" among the city's enterprising metal artisans. See Weaver, "The Location of Manufacturing," 208; Palmer, *Culture in Conflict*, 10.

68 For a discussion of Katz and associates particularly troubling and ambiguous treatment of this subject, see Kristofferson, *Craft Capitalism*, Chapter 1.

69 These manuscripts have been put into machine-readable form as part of the Canadian Industry in 1871 Project directed by Elizabeth and Gerald Bloomfield at the Department of Geography, University of Guelph. Bloomfield and Bloomfield offer extensive discussions concerning the problems, potential pitfalls and copious rewards this source offers the historian. For information on this project, see Elizabeth Bloomfield, "Using the 1871 Census Manuscript Industrial Schedules," 427-41; Elizabeth Bloomfield and Gerald Bloomfield, "Mills, Factories and Craftshops of Ontario, 1870: A Machine-Readable Source for Material Historians," *Material History Bulletin* 25 (1987). For more detailed information see the numerous research reports generated from this project, available from the Department of Geography, University of Guelph. A separate database was assembled from the 1871 Industrial Manuscripts for Hamilton for his study.

70 The recent multi-volume *Dictionary of Hamilton Biography* was especially useful for this purpose, as were some nineteenth century biographical dictionaries. Also informative were the local history columns popular in local newspapers in the first couple of decades of the twentieth century. Much biographical information was also gleaned from a thorough reading of city newspapers for the period 1840 to 1880. Various city promotionals were also helpful. The census information can be found in Census of Canada, 1871, Schedule No. 6 "Return of Industrial

Table 11 — Origins of Hamilton Industrialists, 1871

	All manufacturers		Manu. with >5 employees		Manu. with > $10000 Prod. Val.	
Origins	n	percent	n	percent	n	percent
Artisanal	220	**94.42**	63	**86.30**	55	**87.30**
Merchant/Clerk/ Bookeeper	13	5.58	10	13.70	8	12.70
Other non-artisanal						
TOTALS	**233**	**100**	**73**	**100**	**63**	**100**

Source: 1871 Industrial census database

The database thus assembled covers all sectors of the city's economy, determining the origins of 233 proprietors of the 328 industrial establishments listed on the 1871 Industrial Census for Hamilton.[71] The results are significant. Roughly 95 percent of Hamilton's industrial proprietors whose origins could be traced could claim artisanal origins in 1871. Only about 6% of the city's industrialists came from the ranks of merchants, bookkeepers, clerks or any other non-artisanal occupation (see Table 11).

By their nature, such biographical sources tend to leave evidence of only the more successful of the city's artisans and craftsworkers. To correct this imbalance, I included in the sample proprietors of establishments with five or

Establishments", District No. 24 "Hamilton." Major sources used for cross-reference include T. Melville Bailey, ed., The Dictionary of Hamilton Biography Vols. I, II, III (Hamilton: *Dictionary of Hamilton Biography*, 1981), which provides generally well-researched and documented biographies of prominent Hamiltonians in the nineteenth century. See also: Geo. MacLean Rose, ed., *A Cyclopedia of Canadian Biography* (Toronto: Rose Publishing, 1886); and G.M. Adam, ed., *Prominent Men of Canada: A Collection of Persons Distinguished in Professional and Political Life, in the Commerce and Industry of Canada* (Toronto, 1892). Turn-of-the-century local history writers include Richard Butler for the Hamilton *Spectator*, see Hamilton Public Library (hereafter HPL). Microfilm #121; Joseph Tinsely (a.k.a. "Jaques"), see HPL, "Jaques" Scrapbooks and "Reminiscences of an Old Boy;" for the Dundas *Star*, see HPL Archives File, "W.H. Moss". Available Hamilton newspapers consulted for the period 1840 to 1880 include the Hamilton *Spectator*, *Times*, *Weekly Times*, *Gazette*, *Bee*, *Commercial Advertiser*, *Argus*, *Journal and Express*, *Provincialist*, *Peoples' Journal*, *Canadian Illustrated News*. City promotionals consulted include Hamilton *Spectator* Carnival Edition (1886); *Industries of Canada, Historical and Commercial Sketches, Hamilton and Environs* (Toronto: M.G. Bixby and Company, 1886); and *Hamilton: The Birmingham of Canada* (Hamilton: Times Printing Company, 1892).

71 This data set should be compared with Gutman's study of Paterson, New Jersey, that was based on the biographical backgrounds of only "thirty-odd" prominent manufacturers and confined to a study of that city's locomotive, iron and machinery sectors. It should also be compared with Ross' study of Cincinnati, Ohio, that analyzed the backgrounds of only the leading 10 percent of that city's industrialists in 1850. See Gutman, "The Reality of the Rags-To-Riches 'Myth'," 220 and Ross, *Workers on the Edge*, 79.

fewer employees if these proprietors practised a traditional craft that demanded a degree of skill that was acquired through an established system of apprenticeship.[72]

While the above methodology far exceeds other studies in how extensively it determines the artisanal origins of industrial proprietors in one community, it is still unable to account for the origins of a significant section of the sample. Specifically, the origins of those proprietors employing more than five workers but whose "success" was not sufficient to secure them a place in the privileged historical record of larger concerns cannot be determined. The origins of those largely "in between" these two poles (roughly one-third of all industrial proprietors) can likely never be concluded from the available evidence.[73] Some members of this unknown group could well have had non-artisanal origins. But the overwhelmingly artisanal origins of those proprietors straddling both ends of this spectrum suggest that the results for this group would not have been out of line with the two-thirds of industrial proprietors that could be identified. Given the evidence presented here, it is much more likely that a number of these proprietors were likely small shop artisans who had expanded their way out of the criteria for this sample and whose enterprises were located in sectors of Hamilton's industrial economy, such as the metal industry, that generally favoured – and may have required – artisanal start-ups. Is it unreasonable to assume, for instance, that the blacksmithing establishment of Kavanaugh and Dillion employing five men and a boy in 1871 was an artisanal concern? It is also unlikely that a disproportionately large number of those industrial proprietors who could not be identified were non-artisanal entrepreneurs from outside of Hamilton, businessmen with capital attracted by the opportunities afforded by this industrializing centre. As the biographical information available shows, some undoubtedly were. But a large number of the city's industrial proprietors started out as craftsworkers elsewhere, following the geographic opportunism of established craft tramping networks to pursue self-employment in Hamilton.[74]

There are important questions to ask of this sample. When examining questions of class formation in industrializing society, for instance, should focus not be particularly centred on those sectors where capital accumulation and the congregation of large numbers of wage earners under one roof was the greatest? It *was* significant that small artisan-proprietors existed – and thrived beside larger concerns – to this point in the industrialization process. This per-

72 In view of the fact the historical sources cannot yield conclusive proof of the origins of small masters, this methodology is likely to provide the most accurate prediction.

73 This study was able to identify the origins of 233 out of a total of 328 industrial proprietors from the 1871 Industrial Schedules – roughly two-thirds of the total. It should also be noted that it was not exclusively those "in between" that could not be identified. There were a number of larger masters, for example, for whom information about their origins was not available.

74 Kristofferson, *Craft Capitalism*, Chapter 3.

Table 12 — Origins of Hamilton Industrialists, by Sector, 1871

	Origins				
		Artisanal		Non-Artisanal	Total
Sector	n	percent	n	percent	n
Metal	45	95.74	2	4.26	47
Clothing	50	96.15	2	3.85	52
Wood/ Paper	42	100.00	0	0.00	42
Agricultural	22	95.65	1	4.35	23
Construction	14	100.00	0	0.00	14
Miscellaneous	14	82.35	3	17.65	17
Chemical	1	20.00	4	80.00	5
Beverage/Food	19	95.00	1	5.00	20
Printing	6	100.00	0	0.00	6
Leather	7	100.00	0	0.00	7
Minerals	0	0.00	0	0.00	0
Forest	0	0.00	0	0.00	0
Totals	**220**		**13**		**233**

Source: 1871 Industrial Census Database
Note: Sectors are presented in descending order of economic importance. See Table 2.1.

sistence must be factored into our understanding of the nineteenth century industrial city.

Even if the group of small artisan-proprietors is taken out of the sample, the initial results are supported. Two criteria were used to separate out from the original sample proprietors of more "advanced" industry: number of employees and gross product value. Again, the results show a preponderance of proprietors with artisanal origins. For establishments employing more than five people, over 86% of proprietors had started out as artisans. The situation was similar for concerns boasting $10 000 or more worth of annual product. In this case just over 87% of proprietors could claim artisanal roots (see Table 11). These numbers exceed Ross' survey of the leading 10 percent of Cincinnati's manufacturers, where he found 74.5 percent of proprietors to have risen from the ranks.[75] Most proprietors of Hamilton industries – whether their shops were small or large – claimed artisanal roots in 1871.

It is also notable that proprietors with artisanal backgrounds were not heavily concentrated in only a few industrial sectors. The incidence of artisanal origins among industrial proprietors was spaced fairly evenly across the leading sectors of Hamilton's industrial economy. The sectoral origins of Hamilton's industrial proprietors in 1871 are outlined in Table 12. In the metal,

75 Ross, *Workers on the Edge*, 79.

clothing, wood and paper, agricultural products and construction sectors, which together represented about 85 percent of the city's value-added industrial production, 159 out of 162 proprietors claimed artisanal backgrounds. The predominance of artisanal roots was also heavy in the beverage/food, printing, and leather sectors. Representing about 6 percent of economic activity in the city, 27 of the 28 industrialists in these sectors started as small masters. The origins of proprietors in sectors representing over 90% of industrial economic activity in the city in 1871 were almost completely artisanal.

Conclusion

In the two decades before the early 1870s, industry reshaped the physical landscape of Hamilton, pulling the economic orientation of the city away from commercial endeavour to transform it into one of Canada's pre-eminent industrial cities. City boosters now proudly touted Hamilton as the "Birmingham of Canada" – an apt comparison to a city of diverse small workshops. The most remarkable aspect of the city's industrial development, however, was that, while it was far-reaching, it was achieved largely through the adaptation and expansion of pre-existing structures of production firmly rooted in the traditional crafts world. The early industrialization of Hamilton was indeed "combined and uneven," but with persistent handicraft production standing distinct from the enlarged manufactory. Modern industry, in what limited form it may have existed at all, had yet to establish itself as a typical form of industrial enterprise. All this is not surprising, since those men leading the industrialization of the city were themselves former artisans and craftsworkers intimately familiar with the techniques and possibilities of craft production. Their aggregated efforts created a significant industrialization of a particular character.

This paper has delineated the structures of early industrialization in order to *suggest* the potential space for continuity in craftsworker experience. The task remains for historians to dig deeper, to explore the actual dimensions of craftsworkers' social experience within this broad structure of craft capitalism. Why are craftsworkers' actions commonly presented as a consequence of industrial change when that fundamental change appears not to have taken place to any great extent in what was, arguably, Canada's premier industrial city? Do the findings that almost all industrial proprietors rose from the ranks and that established craft work routines remained largely intact indicate that pre-existing networks of craft mobility may not have been breached to the degree previous studies assume, that dispossession may not yet have been a widespread experience among craftsworkers? How might we reassess the balance between continuity and change in craftsworker culture in this light? Can the recognition of such strong continuities in work, for example, be factored into how we understand craftsworker behaviour and associational life through this time period? How might it be integrated into our understandings of early

unionization, the Nine Hours Movement, the Great Upheaval? Such re-explorations, of course, will need to be predicated on what shopfloor relations meant to craftsworkers and masters at the time, not to historians a century or so later.

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